

## **REMARKS**

In the last Office Action, the Examiner noted that claims 5-7, 16, and 18 have been withdrawn from consideration; indicated that claims 1, 8-11, 14, 15, 17, 20, and 21 are generic; maintained that no certified copy of the priority document has been filed; rejected claims 1-4, 8, 11, 13-15, 17, and 19-21 under 35 U.S.C. § 102(b) as being anticipated by Roberts (U.S. Patent No. 5,999,284); rejected claims 17, 19, 20, and 21 under 35 U.S.C. § 102(b) as being anticipated by Parolari et al. ("SOA based all-optical threshold"); rejected claims 9 and 10 under 35 U.S.C. § 103(a) as being unpatentable over Roberts in view of Nakano (U.S. Patent No. 6,091,540); and rejected claim 12 under 35 U.S.C. § 103(a) as being unpatentable over Roberts in view of Official Notice.

Applicants wish to thank the Examiner for considering the remarks included with the Response to Restriction Requirement filed on April 11, 2003, and for finding claims 1, 8-11, 14, 15, 17, 20, and 21 generic.

Applicants respectfully traverse the Examiner's contention that no certified copy of the priority document has been filed at the U.S. Patent and Trademark Office. On February 6, 2002, Applicants filed a Claim for Priority and included a certified copy of European Patent Application No. 00306465.6. The first page of the priority document, a USPTO dated-stamped copy of which is included herewith, clearly includes a "Certificate" from the European Patent Office certifying that the priority document is an exact copy of European Patent Application No. 00306465.6. Applicants, therefore, respectfully request that, in the next Official Communication, the Examiner acknowledge that the certified copy of the priority document has been received.

Applicants respectfully traverse the rejection of claims rejected claims 1-4, 8, 11, 13-15, 17, and 19-21 under 35 U.S.C. § 102(b) as being anticipated by Roberts for at

FINNEGAN  
HENDERSON  
FARABOW  
GARRETT &  
DUNNER LLP

1300 I Street, NW  
Washington, DC 20005  
202.408.4000  
Fax 202.408.4400  
www.finnegan.com

least the reason that Roberts fails to disclose every claim element. For example, independent claim 1 recites a combination of elements including, *inter alia*, a feedback path connecting the first and second active media so as to route at least a portion of the first and second optical signals from the first and second output ports to the second and first output ports. Similarly, independent claim 17 recites a combination of elements including, *inter alia*, routing at least a portion of the first and second optical signals to the second and first active media. Roberts fails to disclose at least these elements of claims 1 and 17.

Unlike the presently claimed invention, Roberts discloses a feedback waveguide 16 that is coupled to only one input waveguide. As shown in Fig. 1, a single feedback signal F is directed into waveguide 6 and directed along only a single path (i.e., first arm 3) through amplifier 8. (col. 5, line 66 to col. 6, line 2.) Roberts fails to disclose a second feedback signal in addition to signal F. Roberts also fails to disclose directing the single feedback signal F along any path other than through first arm 3. Therefore, Roberts necessarily fails to disclose routing at least a portion of first and second optical signals to both the second and the first active media, as included in claims 1 and 17.

Because Roberts fails to disclose every element of at least independent claims 1 and 17, the Section 102(b) rejection of claims 1-4, 8, 11, 13-15, 17, and 19-21 is improper and should be withdrawn.

Applicants respectfully traverse the rejection of claims 17, 19, 20, and 21 under 35 U.S.C. § 102(b) as being anticipated by Parolari et al. for at least the reason that Parolari et al. fails to disclose every claim element. For example, independent claim 17 recites a combination of elements including, *inter alia*, routing at least a portion of the

FINNEGAN  
HENDERSON  
FARABOW  
GARRETT &  
DUNNER LLP

1300 I Street, NW  
Washington, DC 20005  
202.408.4000  
Fax 202.408.4400  
www.finnegan.com

first and second optical signals, after traversing the first and second active media in first and second forward directions, to the second and first active media as first and second control signals, respectively, in reverse directions opposed to the first and second forward directions. Parolari et al. fails to disclose at least this claim element.

Parolari et al. is discussed in the specification of the present application and is referred to as "reference [2]." In fact, as described in the specification, Parolari et al. is the source of "prior art" Fig. 3. (page 2, line 2.) A fundamental difference between the device of the present application and the device of Parolari et al. is that the device of Parolari et al. provides control signals to the active media in the same direction as the optical signal to be modulated. (page. 4, lines 27-30.) The device of the present application, however, provides control signals to the active media in the reverse direction as the optical signal to be modulated. Indeed, as recited by claim 17, "the first and second optical control signals are supplied through the first and second active media in first and second reverse directions opposed to the first and second forward directions." Because the control signals of Parolari et al. pass through the active media in the same direction as the optical signals to be modulated, Parolari et al. necessarily fails to disclose this element of claim 17. For at least this reason, the Section 102(b) rejection of claims 17, 19, 20, and 21 is improper and should be withdrawn.

Applicants respectfully traverse the rejection of claims 9 and 10 under 35 U.S.C. § 103(a) as being unpatentable over Roberts in view of Nakano. No *prima facie* case of obviousness has been established for at least the reason that no combination of Roberts and Nakano teaches or suggests every claim element. Specifically, Roberts fails to disclose or suggest a feedback path connecting the first and second active

FINNEGAN  
HENDERSON  
FARABOW  
GARRETT &  
DUNNER LLP

1300 I Street, NW  
Washington, DC 20005  
202.408.4000  
Fax 202.408.4400  
www.finnegan.com

media so as to route at least a portion of the first and second optical signals from the first and second output ports to the second and first output ports, as recited by independent claim 1, upon which claims 9 and 10 depend. Nakano, cited only for its disclosure of optical isolators, fails to remedy this deficiency of Roberts. Accordingly, the Section 103(a) rejection of claims 9 and 10 is improper and should be withdrawn.

Applicants respectfully traverse the rejection of claim 12 under 35 U.S.C. § 103(a) as being unpatentable over Roberts in view of Official Notice. No *prima facie* case of obviousness has been established with respect to claim 12 for at least the reason that Roberts, even in view of the Official Notice, fails to teach or suggest every claim element. As noted above, Roberts fails to disclose or suggest a feedback path connecting the first and second active media so as to route at least a portion of the first and second optical signals from the first and second output ports to the second and first output ports, as recited by independent claim 1, upon which claim 12 depends. The Examiner's use of Official Notice, which was relied upon only to support the contention that media and feedback paths may be integrated into a planar waveguide, fails to remedy this deficiency of Roberts. Accordingly, the Section 103(a) rejection of claim 12 is improper and should be withdrawn.

In view of the foregoing remarks, Applicants respectfully submit that examined claims 1-4, 8-15, 17, and 19-21 are in condition for allowance. As the Examiner has agreed, claims 1, 8-11, 14, 15, 17, 20, and 21 are generic. For at least the reasons that non-elected claims 5-7 and 16 depend from and are embraced by generic claim 1, which is in condition for allowance, and non-elected claim 18 depends from and is embraced by generic claim 17, Applicants respectfully request that the Examiner

FINNEGAN  
HENDERSON  
FARABOW  
GARRETT &  
DUNNER LLP

1300 I Street, NW  
Washington, DC 20005  
202.408.4000  
Fax 202.408.4400  
www.finnegan.com

indicate in the next official action that claims 5-7, 16, and 18 are no longer withdrawn from consideration, pursuant to M.P.E.P. § 809.02(c)(B). Applicants further respectfully request that claims 5-7, 16, and 18 be allowed along with claims 1-4, 8-15, 17, and 19-21 for at least the reasons discussed above.

Applicants respectfully request reconsideration and reexamination of this application and timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,  
GARRETT & DUNNER, L.L.P.

Dated: November 18, 2003

By: 

Darren M. Jiron  
Reg. No. 45,777

**Attachments:** a date-stamped copy of the first and second pages of the certified priority document copied from the USPTO file for this application (2 pages)

FINNEGAN  
HENDERSON  
FARABOW  
GARRETT &  
DUNNER LLP

1300 I Street, NW  
Washington, DC 20005  
202.408.4000  
Fax 202.408.4400  
www.finnegan.com



Europäisches  
Patentamt

European  
Patent Office

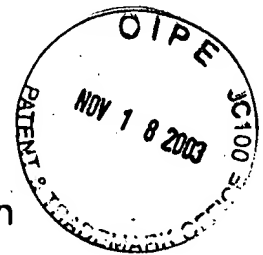
Office eur péen  
des brevets



Bescheinigung

Certificate

Attestation



Die angehefteten Unterla-  
gen stimmen mit der  
ursprünglich eingereichten  
Fassung der auf dem näch-  
sten Blatt bezeichneten  
europäischen Patentanmel-  
dung überein.

The attached documents  
are exact copies of the  
European patent application  
described on the following  
page, as originally filed.

Les documents fixés à  
cette attestation sont  
conformes à la version  
initialement déposée de  
la demande de brevet  
européen spécifiée à la  
page suivante.

Patentanmeldung Nr. Patent application No. Demande de brevet n°

00306465.6

RECEIVED  
NOV 25 2003  
TECHNOLOGY CENTER 2800

Der Präsident des Europäischen Patentamts;  
Im Auftrag

For the President of the European Patent Office

Le Président de l'Office européen des brevets  
p.o.

I.L.C. HATTEN-HECKMAN



Europäisches  
Patentamt

European  
Patent Office

Office européen  
des brevets

**Blatt 2 der Bescheinigung**  
**Sheet 2 of the certificate**  
**Page 2 de l'attestation**

Anmeldung Nr.:  
Application no.:  
Demande n°: 00306465.6

Anmeldetag:  
Date of filing: 28/07/00  
Date de dépôt:

Anmelder:  
Applicant(s):  
Demandeur(s):  
PIRELLI CAVI E SISTEMI S.p.A.  
20126 Milano  
ITALY

Bezeichnung der Erfindung:  
Title of the invention:  
Titre de l'invention:  
Optical threshold and comparison devices and methods

In Anspruch genommene Priorität(en) / Priority(ies) claimed / Priorité(s) revendiquée(s)

Staat:  
State:  
Pays:

Tag:  
Date:  
Date:

Aktenzeichen:  
File no.  
Numéro de dépôt:

Internationale Patentklassifikation:  
International Patent classification:  
Classification internationale des brevets:

G02F3/02, G02F1/01

Am Anmeldetag benannte Vertragsstaaten:  
Contracting states designated at date of filing: AT/BE/CH/CY/DE/DK/ES/FI/FR/GB/GR/IE/IT/LI/LU/MC/NL/PT/SE/TR  
Etats contractants désignés lors du dépôt:

Bemerkungen:  
Remarks:  
Remarques:

RECEIVED  
NOV 25 2003  
TECHNOLOGY CENTER 2800